INSTALLATION RESTORATION PROGRAM

NO FURTHER ACTION DECISION DOCUMENT

SITE SS-015
ENGINE OIL SPILL

PLATTSBURGH AIR FORCE BASE
PLATTSBURGH, NEW YORK

FINAL

Prepared by:

PLATTSBURGH AIR FORCE BASE
PLATTSBURGH, NEW YORK

MAY 1990

TECHNICAL DOCUMENT TO SUPPORT NO FURTHER ACTION

RECORD OF DECISION

SITE NAME AND LOCATION

Installation Restoration Program Site
Capehart Engine Oil Spill, Site SS-015
Plattsburgh AFB, New York

STATEMENT OF BASIS

This decision is based on the results of Installation Restoration Program (IRP) Phase I Records Search and Site Inspection studies conducted at Plattsburgh AFB, with reports dated April 1985 and July 1989, respectively.

DESCRIPTION OF THE SELECTED REMEDY

Based on the current conditions at IRP Site SS-015, it has been determined that no significant risk or threat to public health or the environment exists. Therefore, no further action under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) is required.

DECLARATION

This decision document represents the selected action for this site developed in accordance with CERCLA, as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), and the National Contingency Plan (NCP). It has been determined that the selected remedy of no further action is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate, and is cost-effective. The statutory preference for further treatment is not satisfied because further treatment was found to be unnecessary. Contaminant levels at the site have been determined to present no significant threat to human health or the environment; thus, no treatment is necessary.

14 JUN 1990

STEVEN G. JOSEPH
Colonel, USAF
Commander, 380th Combat Support Group

Date

18 JUN 90

DAVID M. JAMESON, JR.
Colonel, USAF
Vice Commander, 380th Bombardment Wing

Date

#3

SITE SS-015 DECISION DOCUMENT
PLATTSBURGH AIR FORCE BASE

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SITE SS-015 DECISION DOCUMENT
PLATTSBURGH AIR FORCE BASE

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1.0 INTRODUCTION

This Decision Document (1) describes the history of the Plattsburgh Air Force Base (AFB) engine oil spill at the Plattsburgh Barracks housing area (SS-015) (2) presents the results of field investigations at this site, (3) presents results of the public health and ecological risk assessments for the site, and (4) explains why no further action is recommended for this site. Site SS-015 was initially identified in the April 1985 Phase I Records Search, a preliminary assessment of Plattsburgh AFB conducted by Radian Corporation (Radian) (Radian Corporation, 1985). E.C. Jordan Co. (Jordan) also included this site in the Site Inspection (SI) Study (E.C. Jordan Co., 1989). Based on the results of the Phase I Records Search and the Site Inspection Study, E.C. Jordan recommends no further action at Site SS-015.

Site SS-015 was previously designated Site SP-11. Site SP-11 was officially changed to SS-015 because Installation Restoration Program (IRP) site designations were restructured for programming and tracking requirements.

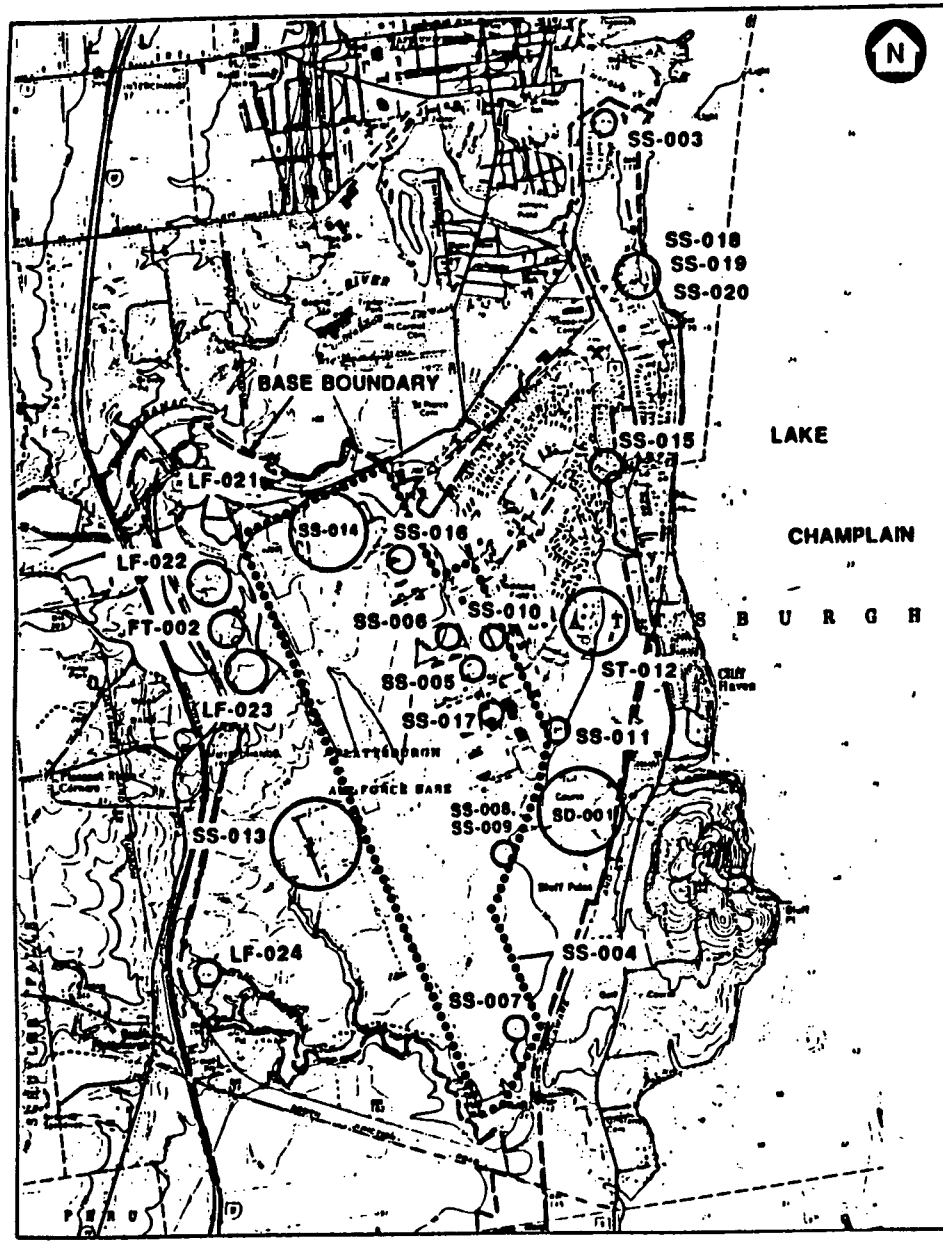
2.0 SITE DESCRIPTION AND HISTORY

Site SS-015 is located at the southwest corner of the Plattsburgh Barracks (old base) and drains sections of the new base housing (Figures 1 and 2). As part of the former Phase I IRP studies, Radian conducted a records search regarding Site SS-015. Appendix A compares the former IRP terminology and the currently used Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) terminology. Radian's findings are summarized in the following paragraphs.

In October 1984, the storm sewer connecting the new base with the Plattsburgh Barracks housing area became clogged by leaves and debris in a grating at the outfall. When maintenance workers proceeded to clean out the sewer, they found a petroleum residue on the water and around the outfall. Oil absorbent materials were placed at various locations along the culvert to remove any petroleum products washed out by the cleaning work.

The Plattsburgh AFB bioenvironmental engineer collected samples of the material for analysis. These samples were obtained from the pool at the culvert's outlet. Laboratory results indicated that the substance was a form of motor oil or lubricating oil. The base concluded that the petroleum residue was engine oil which had been incorrectly disposed of into storm drains by backyard mechanics. An estimated 25 gallons of engine oil were released into the storm sewer.

Because there was evidence of potential environmental contamination, the site received a Hazard Assessment Rating Methodology (HARM) score of 51. A HARM score of 51 indicates a low potential risk. Based on these findings, Radian determined that no further actions are recommended for this site.



SITE LIST

SD-001 Golf Course Drainage

FT-002 Fire Training Area

SS-003 Building 205 Fuel Oil Spill

SS-004 Flight Line And Industrial Area

SS-005 Non-destructive Inspection Facility

SS-006 Aerospace Ground Equipment Facility

SS-007 Former Engine Test Stand

SS-008 Electrical Vault

SS-009 Fuel Valve Pit JP-4 Spill

SS-010 Heavy Equipment Maintenance Facility

SS-011 DRMO (Defense Reutilization and Marketing Office)

ST-012 POL (Petroleum, Oils, and Lubricants) Storage Area

SS-013 Munitions Maintenance Squadron/WSA

SS-014 Alert Area

SS-015 Engine Oil Spill

00-016 Nose Dock 8

SS-017 Building 2774

SS-018 Auto Hobby Shop

SS-019 CES Paint Shop

SS-020 CES Pesticide Tank

LF-021 Former Landfill 1956-1959

LF-022 Former Landfill 1959-1966

LF-023 Former Landfill 1966-1981

LF-024 Construction Spoils Landfill

SOURCE: U.S.G.S. QUADRANGLE PLATTSBURGH, NEW YORK, REDUCED 7.5 MINUTE SERIES.

SCALE IN FEET
0 2,000 4,000

EC JORDAN CO CONSULTING ENGINEERS	SITE LOCATION MAP	
PLATTSBURGH AFB PLATTSBURGH, NEW YORK	JOB NO. 5329-41	FIGURE 1

3.0 SITE INSPECTION RESULTS

E.C. Jordan collected a sediment sample on November 18, 1987 at Site SS-015 for further site characterization (Figure 2). Explorations for this site consisted of the following:

- collected one sediment sample from the bottom of the storm sewer drop box and submitted it for chemical laboratory analysis.

A summary of the data validation is presented in Section 3.1.

Limited information exists for this site concerning geology and hydrogeology. Soils in the vicinity of SS-015 tend to be fine grained sands overlying clay. Groundwater, found between 2 and 4 feet below ground surface, flows in the easterly direction and discharges into Lake Champlain.

3.1 Data Validation Summary

The following is a review of the laboratory sample and quality control data associated with the sample collected from Site SS-015 on November 18, 1987. The sample was collected during the SI study by E.C. Jordan to determine the presence of petroleum constituents.

One sediment sample (JSEWRSD1X1) was collected from the storm sewer drop box located on the eastern boundary of the new base, prior to the storm sewer outfall. The sample was analyzed for VOCs (volatile organic compounds), SVOCs (semi-volatile organic compounds), and inorganics. The sample results appear in summary data Table 1.

3.1.1 Quality Assurance

The sample data were reviewed and evaluated in accordance with USEPA Region I "Laboratory Data Validation; Functional Guidelines for Evaluating Inorganic and Organic Analysis," 1988. Laboratory and field blanks, laboratory and field duplicate analyses, surrogate recoveries, calibrations, field notes, chain-of-custody documentation, and analytical sequences were reviewed.

The results for the elements antimony, arsenic, and mercury were reported as estimated because of low matrix spike recoveries. The result for manganese was reported as estimated because of high matrix spike recovery. The selenium result was rejected because of 0 percent matrix spike recovery.

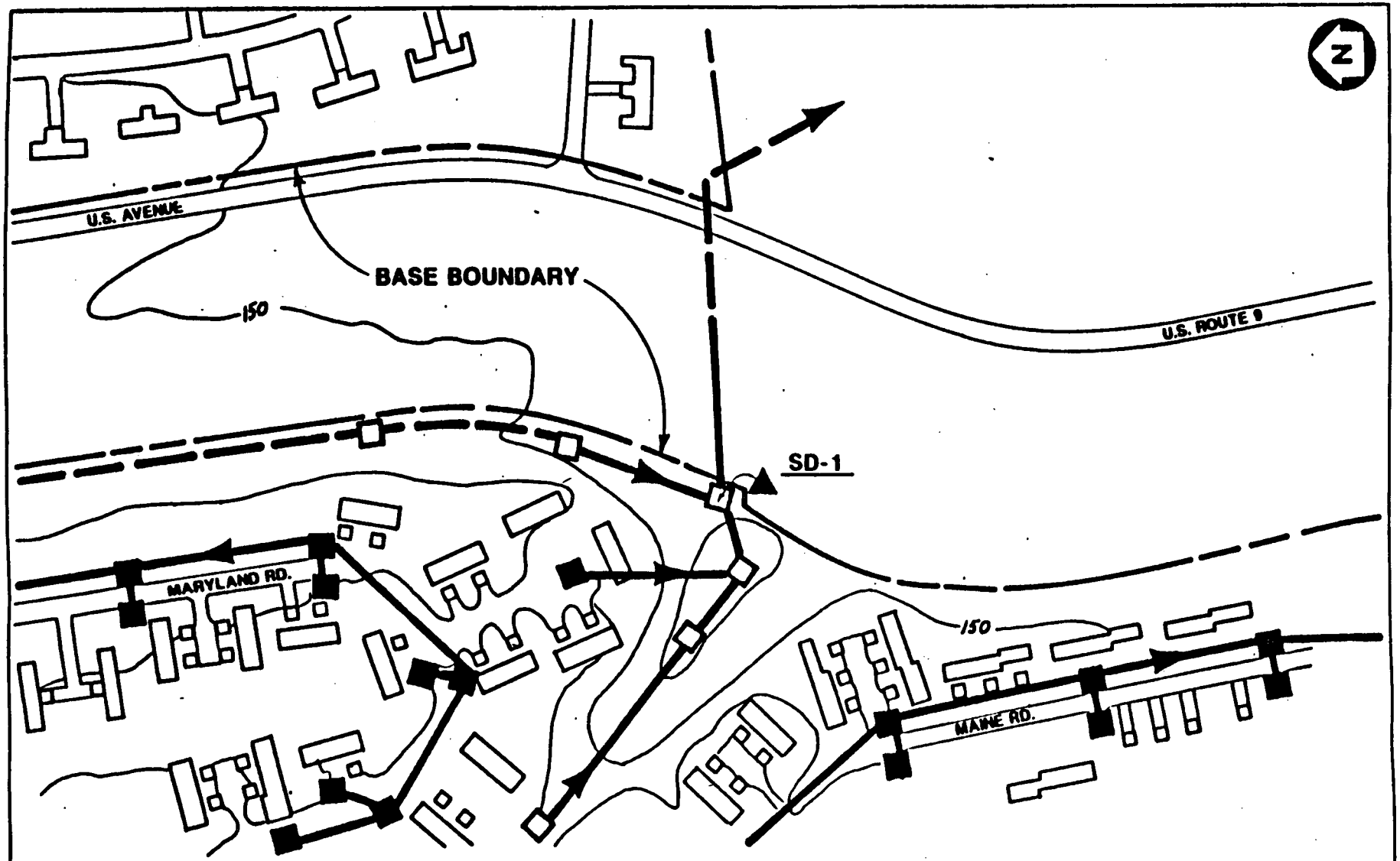


FIGURE 2
SS-015 SITE LOCATION AND EXPLORATIONS
PLATTSBURGH AFB
PLATTSBURGH, NEW YORK

EC JORDAN CO

5329-07

3.1.2 Analytical Analysis

The analytical analysis for VOCs, SVOCs, and inorganics are reviewed in this section.

Volatile Organics

Sample JSEWRSD1X1 was evaluated for method blank contamination due to acetone and methylene chloride. The corrected results were non-detect.

The 2-butanone result for JSEWRSD1X1 was rejected because the calibration response factor was below the acceptance limit.

The acetone result for JSEWRSD1X1 was reported as estimated since the continuing calibration result exceeded the acceptance limit.

Semi-volatile Organics

Sample JSEWRSD1X1 was extracted beyond the holding time. Therefore, all results are reported as estimated for this fraction.

Inorganics

The sample JSEWRSD1X1 was evaluated for method blank contamination for arsenic, copper, lead, magnesium, sodium, and vanadium. The corrected results were non-detect.

4.0 PUBLIC HEALTH AND ECOLOGICAL RISK ASSESSMENTS

This section presents results of the public health and ecological risk assessments based on site history, current usage, and field investigations.

4.1 Public Health Risk Assessment

Since Site SS-015 consists of a storm sewer, direct human exposure to the site is unlikely. A sample of sediment from the bottom of the sewer drop box identified elevated levels of certain inorganic compounds (iron and manganese), which are normal soil constituents, and only trace levels of 1,1,1-Trichloroethane (TCA). Therefore, Site SS-015 is not likely to act as a source of contaminants that may migrate to other environmental media. Potential health risks associated with this site are negligible if not entirely nonexistent.

4.2 Ecological Risk Assessment

Because Site SS-015 is a storm sewer, it is of little importance in terms of habitat for aquatic and terrestrial organisms. Therefore, exposures to the low levels of chemicals detected in storm sewer drain sediments (which are attributable to a non-point discharge) will be limited and ecological risks will be insignificant.

4.3 Conclusions

Based on the risk assessment of the inorganic compounds and trace levels of 1,1,1-TCA detected at Site SS-015, potential public health risks associated with exposure at the site are negligible. Since Site SS-015 consists of a storm sewer, public and wildlife exposure is unlikely.

5.0 RATIONALE FOR NO FURTHER ACTION

The levels of contaminants detected at Site SS-015 were low and the release was a result of a non-point source discharge. Based on the results from the Phase I Records Search, the SI study, and the public health and ecological risk assessments, it is concluded that there is no significant threat to public health or environment at Site SS-015. Plattsburgh AFB will continue to inform the public of proper disposal methods for common, household chemicals in an effort to prevent the future improper disposal of materials. On the basis of Radian's and E.C. Jordan's findings, it is recommended that this site be removed from further consideration in the IRP process.

TABLE 1

PROJECT: Plattsburgh

SEDIMENT SAMPLE ANALYSIS **SS-015** Engine Oil Spill

06-Mar-90

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166890
DATE SAMPLED:	11/18/87
DATE ANALYZED:	11/28/87

ANALYTE UNITS: ug/kg	CRDL		
Chloromethane	10	-	
Bromomethane	10	-	
Vinyl Chloride	10	-	
Chloroethane	10	-	
Methylene Chloride	5	-	
Acetone	10	-	
Carbon Disulfide	5	-	
1,1-Dichloroethene	5	-	
1,1-Dichloroethane	5	-	
1,2-Dichloroethene (total)	5	-	
Chloroform	5	-	
1,2-Dichloroethane	5	-	
2-Butanone	10		R
1,1,1-Trichloroethane	5	-	
Carbon Tetrachloride	5	-	
Vinyl Acetate	10	-	
Bromodichloromethane	5	-	
1,2-Dichloropropane	5	-	
Cis-1,3-Dichloropropene	5	-	
Trichloroethene	5	-	
Dibromochloromethane	5	-	
1,1,2-Trichloroethane	5	-	
Benzene	5	-	
Trans-1,3-Dichloropropene	5	-	
Bromoform	5	-	
4-Methyl-2-Pentanone	10	-	
2-Hexanone	10	-	
Tetrachloroethene	5	-	
1,1,2,2-Tetrachloroethane	5	-	
Toluene	5	-	
Chlorobenzene	5	-	
Ethylbenzene	5	-	
Styrene	5	-	
Xylenes (Total)	5	-	

Dilution Factor:	1
Percent Solids:	9

Associated Method Blank: GC871128C14

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166890
DATE SAMPLED:	11/18/87
DATE EXTRACTED:	11/28/87
DATE ANALYZED:	12/03/87

ANALYTE UNITS: ug/kg	CRDL	
Phenol	330	-
bis(2-Chloroethyl)ether	330	-
2-Chlorophenol	330	-
1,3-Dichlorobenzene	330	-
1,4-Dichlorobenzene	330	-
Benzyl alcohol	330	-
1,2-Dichlorobenzene	330	-
2-Methylphenol	330	-
bis(2-Chloroisopropyl)ether	330	-
4-Methylphenol	330	-
N-Nitroso-di-n-propylamine	330	-
Hexachloro	330	-
Nitrobenzene	330	-
Isophorone	330	-
2-Nitrophenol	330	-
2,4-Dimethylphenol	330	-
Benzoic acid	1600	-
bis(2-Chloroethoxy)methane	330	-
2,4-Dichlorophenol	330	-
1,2,4-Trichlorobenzene	330	-
Naphthalene	330	-
4-Chloroaniline	330	-
Hexachlorobutadiene	330	-
4-Chloro-3-Methylphenol	330	-
2-Methylnaphthalene	330	-
Hexachlorocyclopentadiene	330	-
2,4,6-Trichlorophenol	330	-
2,4,5-Trichlorophenol	1600	-
2-Chloronaphthalene	330	-
2-Nitroaniline	1600	-
Dimethylphthalate	330	-
Acenaphthylene	330	-
2,6-Dinitrotoluene	330	-

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166890
DATE SAMPLED: 11/18/87
DATE EXTRACTED: 11/28/87
DATE ANALYZED: 12/03/87

ANALYTE UNITS: ug/kg	CRDL	
3-Nitroaniline	1600	-
Acenaphthene	330	-
2,4-Dinitrophenol	1600	-
4-Nitrophenol	1600	-
Dibenzofuran	330	-
2,4-Dinitrotoluene	330	-
Diethylphthalate	330	-
4-Chlorophenyl-phenylether	330	-
Fluorene	330	-
4-Nitroaniline	1600	-
4,6-Dinitro-2-methylphenol	1600	-
N-Nitrosodiphenylamine	330	-
4-Bromophenyl-phenylether	330	-
Hexachlorobenzene	330	-
Pentachlorophenol	1600	-
Phenanthrene	330	-
Anthracene	330	-
Di-n-butylphthalate	330	-
Fluoranthene	330	-
Pyrene	330	-
Butylbenzylphthalate	330	-
3,3'-Dichlorobenzidine	660	-
Benzo(a)Anthracene	330	-
Chrysene	330	-
bis(2-Ethylhexyl)phthalate	330	-
Di-n-octylphthalate	330	-
Benzo(b)Fluoranthene	330	-
Benzo(k)Fluoranthene	330	-
Benzo(a)Pyrene	330	-
Indeno(1,2,3-cd)pyrene	330	-
Dibenz(a,h)anthracene	330	-
Benzo(g,h,i,)perylene	330	-

Dilution Factor: 1.0
Percent Solids: 9

Associated Method Blank: GH068836C07

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166892
DATE SAMPLED:	11/18/87

ANALYTE UNITS: mg/kg	CRDL		
Aluminum	40	854	
Antimony	12	-	
Arsenic	2	-	
Barium	40	-	
Beryllium	1	-	
Cadmium	1	-	
Calcium	1000	17600	
Chromium	2	-	
Cobalt	10	-	
Copper	5	-	
Iron	20	264000	
Lead	1	-	
Magnesium	1000	-	
Manganese	3	10100	
Mercury	0.1	-	
Nickel	8	-	
Potassium	1000	-	
Selenium	1		R
Silver	2	-	
Sodium	1000	-	
Thallium	2	-	
Vanadium	10	-	
Zinc	4	71	
Cyanide	1	-	

Percent Solids:	10
Associated Method Blank:	13229A

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRDL	Contract Required Detection Limit
FS	feasibility study
HARM	Hazard Assessment Rating Methodology
IRP	Installation Restoration Program
mg/kg	milligrams per kilogram
NCP	National Contingency Plan
PA	preliminary assessment
QC	quality control
RI	remedial investigation
SI	site inspection
SPDES	State Pollutant Discharge Elimination System
SVOC	semi-volatile organic compound
TCA	trichloroethane
ug/kg	micrograms per kilogram
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

DATA QUALIFIER KEY

Organic Data Qualifiers (Flags)

B - Indicates the analyte was detected in both the sample and associated method blank.

E - Indicates that the concentration reported exceeded the calibration range of the analysis method and that sample should have been deluted and reanalyzed.

J - Indicates an estimated value because value is below the Contract Required Detection Limit (CRDL) or all quality assurance criteria were not met during analysis.

JJ - Validation flag for values below CRDL only.

N - Spiked sample recovery was not within control limits.

R - Indicates that data are not useable because QC criteria were not met.

U - Indicates that parameter was analyzed for but not detected at the concentration value preceeding the qualifier.

UJ - Non-detect result was estimated; Quality Control (QC) not acceptable.

UR - Non-detected result was rejected; QC not acceptable.

[] - Value reported is less than CRDL.

* - Duplicate analysis was not within control limits.

REFERENCES

E.C. Jordan Co., 1989. "Site Inspection Report"; Installation Restoration Program; Plattsburgh Air Force Base, New York; July 1989.

Radian Corporation, 1985. "Installation Restoration Program, Phase I: Records Search, Plattsburgh AFB, New York"; U.S. Air Force; HQ SAC/DEPVQ; Offutt AFB, Nebraska; April 1985.

APPENDIX A

COMPARISON OF FORMER IRP TERMINOLOGY AND CERCLA TERMINOLOGY

The SI performed at Plattsburgh AFB was originally assigned within the four-phase IRP structure as the Site Confirmation Study (Phase II, Stage 1). The U.S. Air Force has since revised the terminology of stages within the IRP to correspond directly with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). The following is a general comparison of the former IRP terminology and the CERCLA terminology.

CERCLA	FORMER IRP
Preliminary Assesment (PA)	Phase I Records Search
Site Inspection (SI)	Phase II Stage 1 Site Confirmation
Remedial Investigation (RI)	Phase II Stage 2 Site Quantification
Feasibility Study (FS)	Phase IV(A) Alternative Analysis
Remedial Design	Phase IV(B) Remedial Design
Implementation/Operation	Phase IV(B) Implementation

In the former IRP terminology, Phase III was reserved for technology development and testing, which can be likened to treatability studies that may be conducted during the RI/FS process.

APPENDIX B

SEDIMENT SAMPLE RESULTS
LABORATORY AND FLAGGED DATA TABLES

LABORATORY DATA TABLES

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166890
DATE SAMPLED: 11/18/87
DATE ANALYZED: 11/28/87

ANALYTE UNITS: ug/kg	CRDL	
Chloromethane	10	110 U
Bromomethane	10	110 U
Vinyl Chloride	10	110 U
Chloroethane	10	110 U
Methylene Chloride	5	130 B
Acetone	10	270 B
Carbon Disulfide	5	57 U
1,1-Dichloroethene	5	57 U
1,1-Dichloroethane	5	57 U
1,2-Dichloroethene (total)	5	57 U
Chloroform	5	57 U
1,2-Dichloroethane	5	57 U
2-Butanone	10	110 U
1,1,1-Trichloroethane	5	22 J
Carbon Tetrachloride	5	57 U
Vinyl Acetate	10	110 U
Bromodichloromethane	5	57 U
1,2-Dichloropropane	5	57 U
Cis-1,3-Dichloropropene	5	57 U
Trichloroethene	5	57 U
Dibromochloromethane	5	57 U
1,1,2-Trichloroethane	5	57 U
Benzene	5	57 U
Trans-1,3-Dichloropropene	5	57 U
Bromoform	5	57 U
4-Methyl-2-Pentanone	10	110 U
2-Hexanone	10	110 U
Tetrachloroethene	5	57 U
1,1,2,2-Tetrachloroethane	5	57 U
Toluene	5	57 U
Chlorobenzene	5	57 U
Ethylbenzene	5	57 U
Styrene	5	57 U
Xylenes (Total)	5	57 U

Dilution Factor: 11.36
Percent Solids: 9

Associated Method Blank: GC871128C14

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166890
DATE SAMPLED:	11/18/87
DATE EXTRACTED:	11/28/87
DATE ANALYZED:	12/03/87

ANALYTE UNITS: ug/kg	CRDL	
Phenol	330	3800 U
bis(2-Chloroethyl)ether	330	3800 U
2-Chlorophenol	330	3800 U
1,3-Dichlorobenzene	330	3800 U
1,4-Dichlorobenzene	330	3800 U
Benzyl alcohol	330	3800 U
1,2-Dichlorobenzene	330	3800 U
2-Methylphenol	330	3800 U
bis(2-Chloroisopropyl)ether	330	3800 U
4-Methylphenol	330	3800 U
N-Nitroso-di-n-propylamine	330	3800 U
Hexachloro	330	3800 U
Nitrobenzene	330	3800 U
Isophorone	330	3800 U
2-Nitrophenol	330	3800 U
2,4-Dimethylphenol	330	3800 U
Benzoic acid	1600	19000 U
bis(2-Chloroethoxy)methane	330	3800 U
2,4-Dichlorophenol	330	3800 U
1,2,4-Trichlorobenzene	330	3800 U
Naphthalene	330	3800 U
4-Chloroaniline	330	3800 U
Hexachlorobutadiene	330	3800 U
4-Chloro-3-Methylphenol	330	3800 U
2-Methylnaphthalene	330	3800 U
Hexachlorocyclopentadiene	330	3800 U
2,4,6-Trichlorophenol	330	3800 U
2,4,5-Trichlorophenol	1600	19000 U
2-Chloronaphthalene	330	3800 U
2-Nitroaniline	1600	19000 U
Dimethylphthalate	330	3800 U
Acenaphthylene	330	3800 U
2,6-Dinitrotoluene	330	3800 U

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166890
DATE SAMPLED: 11/18/87
DATE EXTRACTED: 11/28/87
DATE ANALYZED: 12/03/87

ANALYTE UNITS: ug/kg	CRDL	
3-Nitroaniline	1600	19000 U
Acenaphthene	330	3800 U
2,4-Dinitrophenol	1600	19000 U
4-Nitrophenol	1600	19000 U
Dibenzofuran	330	3800 U
2,4-Dinitrotoluene	330	3800 U
Diethylphthalate	330	3800 U
4-Chlorophenyl-phenylether	330	3800 U
Fluorene	330	3800 U
4-Nitroaniline	1600	19000 U
4,6-Dinitro-2-methylphenol	1600	19000 U
N-Nitrosodiphenylamine	330	3800 U
4-Bromophenyl-phenylether	330	3800 U
Hexachlorobenzene	330	3800 U
Pentachlorophenol	1600	19000 U
Phenanthrene	330	3800 U
Anthracene	330	3800 U
Di-n-butylphthalate	330	3800 U
Fluoranthene	330	3800 U
Pyrene	330	3800 U
Butylbenzylphthalate	330	3800 U
3,3'-Dichlorobenzidine	660	7500 U
Benzo(a)Anthracene	330	3800 U
Chrysene	330	3800 U
bis(2-Ethylhexyl)phthalate	330	530 J
Di-n-octylphthalate	330	3800 U
Benzo(b)Fluoranthene	330	3800 U
Benzo(k)Fluoranthene	330	3800 U
Benzo(a)Pyrene	330	3800 U
Indeno(1,2,3-cd)pyrene	330	3800 U
Dibenz(a,h)anthracene	330	3800 U
Benzo(g,h,i,)perylene	330	3800 U

Dilution Factor: 11.32
Percent Solids: 9

Associated Method Blank: GH068836C07

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166892
DATE SAMPLED: 11/18/87

ANALYTE UNITS: mg/kg	CRDL		
Aluminum	40	854	
Antimony	12	50	UN
Arsenic	2	4	[]N
Barium	40	327	[]
Beryllium	1	1.9	U
Cadmium	1	9.6	U
Calcium	1000	17600	
Chromium	2	15	[]E
Cobalt	10	3.8	UE
Copper	5	26	[]
Iron	20	264000	*
Lead	1	8	[]
Magnesium	1000	1230	[]E
Manganese	3	10100	N*
Mercury	0.1	0.9	UN
Nickel	8	44	U
Potassium	1000	3080	U
Selenium	1	5.2	UN
Silver	2	12	U
Sodium	1000	2190	[]
Thallium	2	1.5	U
Vanadium	10	35	[]E
Zinc	4	71	
Cyanide	1	4.9	U

Percent Solids: 10

Associated Method Blank: 13229A

FLAGGED DATA TABLES

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166890
DATE SAMPLED: 11/18/87
DATE ANALYZED: 11/28/87

ANALYTE UNITS: ug/kg	CRDL	
Chloromethane	10	110 U
Bromomethane	10	110 U
Vinyl Chloride	10	110 U
Chloroethane	10	110 U
Methylene Chloride	5	130 U
Acetone	10	270 UJ
Carbon Disulfide	5	57 U
1,1-Dichloroethene	5	57 U
1,1-Dichloroethane	5	57 U
1,2-Dichloroethene (total)	5	57 U
Chloroform	5	57 U
1,2-Dichloroethane	5	57 U
2-Butanone	10	110 UR
1,1,1-Trichloroethane	5	22 JJ
Carbon Tetrachloride	5	57 U
Vinyl Acetate	10	110 U
Bromodichloromethane	5	57 U
1,2-Dichloropropane	5	57 U
Cis-1,3-Dichloropropene	5	57 U
Trichloroethene	5	57 U
Dibromochloromethane	5	57 U
1,1,2-Trichloroethane	5	57 U
Benzene	5	57 U
Trans-1,3-Dichloropropene	5	57 U
Bromoform	5	57 U
4-Methyl-2-Pentanone	10	110 U
2-Hexanone	10	110 U
Tetrachloroethene	5	57 U
1,1,2,2-Tetrachloroethane	5	57 U
Toluene	5	57 U
Chlorobenzene	5	57 U
Ethylbenzene	5	57 U
Styrene	5	57 U
Xylenes (Total)	5	57 U

Dilution Factor: 1
Percent Solids: 9

Associated Method Blank: GC87112BC14

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166890
DATE SAMPLED:	11/18/87
DATE EXTRACTED:	11/28/87
DATE ANALYZED:	12/03/87

ANALYTE UNITS: ug/kg	CRDL	
Phenol	330	3600 UJ
bis(2-Chloroethyl)ether	330	3600 UJ
2-Chlorophenol	330	3600 UJ
1,3-Dichlorobenzene	330	3600 UJ
1,4-Dichlorobenzene	330	3600 UJ
Benzyl alcohol	330	3600 UJ
1,2-Dichlorobenzene	330	3600 UJ
2-Methylphenol	330	3600 UJ
bis(2-Chloroisopropyl)ether	330	3600 UJ
4-Methylphenol	330	3600 UJ
N-Nitroso-di-n-propylamine	330	3600 UJ
Hexachloro	330	3600 UJ
Nitrobenzene	330	3600 UJ
Isophorone	330	3600 UJ
2-Nitrophenol	330	3600 UJ
2,4-Dimethylphenol	330	3600 UJ
Benzoic acid	1600	17000 UJ
bis(2-Chloroethoxy)methane	330	3600 UJ
2,4-Dichlorophenol	330	3600 UJ
1,2,4-Trichlorobenzene	330	3600 UJ
Naphthalene	330	3600 UJ
4-Chloroaniline	330	3600 UJ
Hexachlorobutadiene	330	3600 UJ
4-Chloro-3-Methylphenol	330	3600 UJ
2-Methylnaphthalene	330	3600 UJ
Hexachlorocyclopentadiene	330	3600 UJ
2,4,6-Trichlorophenol	330	3600 UJ
2,4,5-Trichlorophenol	1600	17000 UJ
2-Chloronaphthalene	330	3600 UJ
2-Nitroaniline	1600	17000 UJ
Dimethylphthalate	330	3600 UJ
Acenaphthylene	330	3600 UJ
2,6-Dinitrotoluene	330	3600 UJ

SAMPLE LOCATION:	JSEWRSD1X1
LAB NUMBER:	166890
DATE SAMPLED:	11/18/87
DATE EXTRACTED:	11/28/87
DATE ANALYZED:	12/03/87

ANALYTE UNITS: ug/kg	CRDL	
3-Nitroaniline	1600	17000 UJ
Acenaphthene	330	3600 UJ
2,4-Dinitrophenol	1600	17000 UJ
4-Nitrophenol	1600	17000 UJ
Dibenzofuran	330	3600 UJ
2,4-Dinitrotoluene	330	3600 UJ
Diethylphthalate	330	3600 UJ
4-Chlorophenyl-phenylether	330	3600 UJ
Fluorene	330	3600 UJ
4-Nitroaniline	1600	17000 UJ
4,6-Dinitro-2-methylphenol	1600	17000 UJ
N-Nitrosodiphenylamine	330	3600 UJ
4-Bromophenyl-phenylether	330	3600 UJ
Hexachlorobenzene	330	3600 UJ
Pentachlorophenol	1600	17000 UJ
Phenanthrene	330	3600 UJ
Anthracene	330	3600 UJ
Di-n-butylphthalate	330	3600 UJ
Fluoranthene	330	3600 UJ
Pyrene	330	3600 UJ
Butylbenzylphthalate	330	3600 UJ
3,3'-Dichlorobenzidine	660	7200 UJ
Benzo(a)Anthracene	330	3600 UJ
Chrysene	330	3600 UJ
bis(2-Ethylhexyl)phthalate	330	530 JJ
Di-n-octylphthalate	330	3600 UJ
Benzo(b)Fluoranthene	330	3600 UJ
Benzo(k)Fluoranthene	330	3600 UJ
Benzo(a)Pyrene	330	3600 UJ
Indeno(1,2,3-cd)pyrene	330	3600 UJ
Dibenz(a,h)anthracene	330	3600 UJ
Benzo(g,h,i,)perylene	330	3600 UJ

Dilution Factor:	1.0
Percent Solids:	9

Associated Method Blank: GH068836C07

SAMPLE LOCATION: JSEWRSD1X1
LAB NUMBER: 166892
DATE SAMPLED: 11/18/87

ANALYTE UNITS: mg/kg	CRDL		
Aluminum	40	854	
Antimony	12	50	UJ
Arsenic	2	4	UJ
Barium	40	327	[]
Beryllium	1	1.9	U
Cadmium	1	9.6	U
Calcium	1000	17600	
Chromium	2	15	[] J
Cobalt	10	3.8	U
Copper	5	26	U
Iron	20	264000	
Lead	1	8	U
Magnesium	1000	1230	U
Manganese	3	10100	
Mercury	0.1	0.9	UJ
Nickel	8	44	U
Potassium	1000	3080	U
Selenium	1	5.2	UR
Silver	2	12	U
Sodium	1000	2190	U
Thallium	2	1.5	U
Vanadium	10	35	U
Zinc	4	71	
Cyanide	1	4.9	UJ

Percent Solids: 10

Associated Method Blank: 13229A